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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,875	07/28/2003	Richard Christopher DeCharms	27969-705	3884

21971 7590 01/29/2007  
WILSON SONSINI GOODRICH & ROSATI  
650 PAGE MILL ROAD  
PALO ALTO, CA 94304-1050

EXAMINER
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LAMPRECHT, JOEL

ART UNIT	PAPER NUMBER
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3737

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/29/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/628,875

Applicant(s)

DECHARMS, RICHARD  
CHRISTOPHER

Examiner

Joel M. Lamprecht

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 7/24/06, 10/11/06.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, 14-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Renshaw (US 20020019364 A1). Renshaw discloses a computer assisted method to diagnose a condition having a subject perform a behavior or have a perception adapted to activate a region or more of interest associated with a condition [0049], measuring activity of a ROI [0075], diagnosing the condition in response to the behavior, performing an intervention and repeating later to observe changes [0076-0078]. The measuring activity is performed by fMRI [0075], the measuring activity is made less than 10 seconds relative to when the activity is measured [0089], a pharmacological agent was administered [0075], a therapeutic method was also pursued, including providing images to the subject [0075, 0079, 0081, 0086, and 0087], images for diagnosis are produced while the instrument used for measurement remains positioned about the subject [0089], one of the regions of interest was primarily functioned to release a neuromodulatory substance from the list of dopamine, Ach, noradrenaline, serotonin and endogenous opiate [0075-0078 and 0080], the subject has one or more of ADD, depression, addiction, schizophrenia [0043], an image was shown to the subject [0087-0088], Software is provided to guide testing comprising logic to communicate

instructions to a subject to perform a behavior or a first stimulus, logic for taking measurements of activity, and selecting a second behavior or stimulus based at least in part on brain activity, as well as logic for testing activity measurements and performing diagnosis of the subject [0087-0089] where determinations are performed in less than 10 seconds relative to the brain activity [0087].

3. Claims 1 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Toomim et al. (US 5,995,857). Toomim et al. disclose a computer assisted method to diagnose a condition having a subject perform a behavior or have a perception adapted to activate a region or more of interest associated with a condition (Col 2 Line 45-60), measuring activity of a ROI, diagnosing the condition in response to the behavior, performing an intervention and repeating later to observe changes (Col 1 Line 55 – Col 2 Line 15), software for guiding testing comprising logic for taking measurements of one or more ROIs and selecting a second behavior based in part on measured activity, and logic for communicating instructions with the subject (Col 4 Lines 15-38), the determinations are made in less than 10 seconds relative to when the brain activity measurement is taken (real time) with optical imaging (Col 1 Line 17-23, Col 2 Line 42-45, and Claim 1).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7-13, 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toomim et al in view of Lai et al. (US 5,887,074) Toomim et al disclose measuring brain activity using optical sensing and providing feedback to a patient in real time based on measured or determined functions of brain activity in a ROI as disclosed above. Toomim et al does not explicitly disclose a functional MR imaging method to acquire information or the assessment of voxels in specific dimensions. Attention is then directed to the secondary reference by Liu et al. which generally demonstrates that voxel sizes can actively vary within an n-dimensional vector thereby teaching size variance including 1x1x1 and 5x5x5cm as common image processing techniques (Col 3 Line 15-45, all of Column 5, and Col 9 Lines 10-30). It would have been obvious to one having ordinary skill in the art at the time of the invention to have obtained measurements from volumes as in Liu et al. in the invention described by Toomim et al. to obtain high resolution real-time data of a patient to facilitate diagnosis as is known in the art.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joel M. Lamprecht whose telephone number is (571) 272-3250. The examiner can normally be reached on Monday-Friday 7:30AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian L. Casler can be reached on (571)272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JML  
1/11/07

  
ELENI MANTIS MERCADER  
SUPERVISORY PATENT EXAMINER